Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1   Claim 1 (previously presented): Apparatus for providing a
2   web-accessible virtual processing environment to a
3   network-connected office server for a remotely connected
4   user computer through which a user stationed at the
5   computer can execute any of a plurality of server-based
6   applications resident at the office server, comprising:
7   a platform, capable of being situated in network
8   communication between the user computer and the office
9   server, having:
10   a processor;
11   a memory connected to the processor and for
12   storing computer executable instructions therein;
13   first and second network interfaces, operable in
14   conjunction with the processor, for interfacing the
15   platform, through the first network interface, to a wide
16   area network (WAN) connection through which the remote user
17   computer obtains connectivity to the platform, and, through
18   the second network interface, to a local area network (LAN)
19   having a server computer electrically communicative
20   thereover, respectively, with the server computer forming
21   the office server; and

22   wherein, in response to the executable
23 instructions, the processor, for each one of the
24 server-based applications:
25   provides, through a corresponding client
26 application module implemented on the platform for each of
27 the server-based applications, bi-directional protocol
28 conversion of messages between the remote user computer and
29 the office server, such that user interaction data,
30 intended for a specific one of the server-based
31 applications and provided by a browser executing on the
32 remote user computer in a first protocol, is converted into
33 a second protocol associated with said one server-based
34 application and then applied to the server-based
35 application at the office server, and output data, provided
36 by said specific one server-based application, is converted
37 from the second protocol to the first protocol for being
38 transmitted to the user computer and graphically rendered
39 thereat, through the browser, to the user.

1 Claim 2 (original): The apparatus in claim 1 wherein the
2 processor, in response to execution of the stored
3 instructions:
4   for messages emanating from the user computer and
5 appearing on the WAN connection:
6   receives, from the browser, a first message
7 containing the user interaction data associated with a
8 specific one server-based application and in the first
9 protocol;
10   converts the user interaction data in the first
11 protocol to the second protocol associated with the

12 specific one server-based application to yield a second

13 message; and

14   applies the second message, as input, to the

15 server computer for processing by the specific one

16 server-based application; and

17   for messages emanating from the server computer and

18 appearing on the LAN:

19   receives, from the server computer and over the

20 LAN connection, a third message containing output data

21 generated by the specific one server-based application and

22 in the second protocol;

23   converts the output data message in the second

24 protocol to the first protocol to yield a fourth message;

25 and

26   applies the fourth message to the WAN connection

27 for transmission to the browser in order to render the

28 output data thereat.

1   Claim 3 (original): The apparatus in claim 2 wherein the

2   server computer comprises a corresponding server for each

3   of the server-based applications and is implemented either

4   coincident with the platform or as at least one physical

5   computer separate from the platform and connected, via the

6   LAN, to it.

1   Claim 4 (currently amended): Apparatus for providing a

2   web-accessible virtual processing environment to a

3   network-connected office server for a remotely connected

4   user computer through which a user stationed at the

5 computer can execute any of a plurality of server-based

6 applications resident at the office server, comprising:

7   a platform, capable of being situated in network

8 communication between the user computer and the office

9 server, having:

10   a processor;

11   a memory connected to the processor and for

12 storing computer executable instructions therein;

13   first and second network interfaces,

14 operable in conjunction with the processor, for

15 interfacing the platform, through the first network

16 interface, to a wide area network (WAN) connection

17 through which the remote user computer obtains

18 connectivity to the platform, and, through the second

19 network interface, to a local area network (LAN)

20 having a server computer electrically communicative

21 thereover, respectively, with the server computer

22 forming the office server; and

23   wherein, in response to the executable instructions,

24 the processor, for each one of the server-based

25 applications:

26   provides, through a corresponding client

27   application module implemented on the platform

28   for each of the server-based applications,

29   bi-directional protocol conversion of messages

30   between the remote user computer and the office

31   server, such that user interaction data, intended

32   for a specific one of the server-based

33   applications and provided by a browser executing

34   on the remote user computer in a first protocol,

35   is converted into a second protocol associated

36   with said one server-based application and then

37   applied to the server-based application at the

38   office server, and output data, provided by said

39   specific one server-based application, is

40   converted from the second protocol to the first

41   protocol for being transmitted to the user

42   computer and graphically rendered thereat,

43   through the browser, to the user;

44   wherein the processor, in response to execution of the

45   stored instructions:

46   for messages emanating from the user computer and

47   appearing on the WAN connection:

48   receives, from the browser, a first message

49   containing the user interaction data associated

50   with a specific one server-based application and

51   in the first protocol;

52   converts the user interaction data in the

53   first protocol to the second protocol associated

54   with the specific one server-based application to

55   yield a second message; and

56   applies the second message, as input, to the

57   server computer for processing by the specific

58   one server-based application; and

59   for messages emanating from the server computer and

60   appearing on the LAN:

61   receives, from the server computer and over

62   the LAN connection, a third message containing

63   output data generated by the specific one

64   server-based application and in the second

65   protocol;

66   converts the output data message in the

67   second protocol to the first protocol to yield a

68   fourth message; and

69   applies the fourth message to the WAN

70   connection for transmission to the browser in

71   order to render the output data thereat;

72   wherein the server computer comprises a corresponding

73 server for each of the server-based applications and is

74 implemented either coincident with the platform or as at

75 least one physical computer separate from the platform and

76 connected, via the LAN, to it~;

77   ~The~ the apparatus ~in claim 3~ further comprising, in

78 the platform, a separate corresponding software-implemented

79 application module for each of the specific server-based

80 applications for providing protocol translation of the user

81 interaction data and output data between the first and

82 second protocols; the application module comprises:

83   a user interaction component communicative,

84   through the WAN connection, with the browser, for

85   accepting the user interaction data from the browser

86   in the first protocol and for providing said output

87   data to the browser in the first protocol;

88   a state machine, communicative through an

89   application processing interface with the user

90   interaction component, for interpreting each command

91   issued by the user interaction component so as to

92   provide the user interaction data to the specific one

93   server-based application executing on the server

94   computer, and communicative through a client protocol
95   component, for sending user interaction data to the
96   server-based application and for receiving said output
97   information from the specific one server-based
98   application; and
99   a client protocol component, operative in
100   conjunction with the state machine, for converting the
101   user interaction data received from the state machine
102   into the second protocol and applying resultant
103   messages in the second protocol to the specific one
104   server-based application, and for receiving said
105   output data in the second protocol from the specific
106   one server-based application and applying said output
107   data to the state machine.

1   Claim 5 (original): The apparatus in claim 4 wherein the
2   server-based applications comprise thin-client application
3   hosting, e-mail and shared file access; and the first
4   protocol comprises HTTP, secure HTTP, or a protocol with
5   AIP-like functionality and the second protocol comprises
6   RDP (remote desktop protocol), IMAP (Internet mail access
7   protocol) or SMB (server message block).

1   Claim 6 (original): The apparatus in claim 5 wherein the
2   user interaction data comprises a designation of a uniform
3   resource locator (URL), uniform resource identifier (URI),
4   form input, keystrokes or mouse clicks that returns
5   associated information desired by the user, and output data
6   comprises graphical display data.

1   Claim 7 (original): The apparatus in claim 6 wherein said

2   output data comprises bitmap graphic output display data

3   generated by the specific one server-based application.

1   Claim 8 (original): The apparatus in claim 7 wherein the

2   WAN connection comprises either a private network

3   connection or an Internet connection.

1   Claim 9 (original): The apparatus in claim 8 wherein the

2   second network interface comprises an Ethernet interface,

3   and the first network interface comprises a broadband

4   network interface.

1   Claim 10 (original): The apparatus in claim 9 wherein the

2   broadband network interface comprises a digital subscriber

3   line (DSL) interface, a cable modem, an integrated services

4   digital network (ISDN) interface, a T1 interface or a

5   fractional T1 interface.

1   Claim 11 (previously presented): A method for use, in

2   apparatus, which provides for providing a web-accessible

3   virtual processing environment to a network-connected

4   office server for a remotely connected user computer

5   through which a user stationed at the computer can execute

6   any of a plurality of server-based applications resident at

7   the office server, the apparatus comprising a platform,

8   capable of being situated in network communication between

9   the user computer and the office server, having: a

10   processor, a memory connected to the processor and for

11   storing computer executable instructions therein; first and

12   second network interfaces, operable in conjunction with the

13   processor, for interfacing the platform, through the first

14   network interface, to a wide area network (WAN) connection

15   through which the remote user computer obtains connectivity

16   to the platform, and, through the second network interface,

17   to a local area network (LAN) having a server computer

18   electrically communicative thereover, respectively, with

19   the server computer forming the office server; wherein, the

20   method comprises the steps, performed by the processor, for

21   each one of the server-based applications:

22   providing, through a corresponding client application

23   module implemented on the platform for each of the

24   server-based applications, bi-directional protocol

25   conversion of messages between the remote user computer and

26   the office server, wherein the providing step comprises the

27   steps of:

28   converting user interaction data, intended for a

29   specific one of the server-based applications and provided

30   by a browser executing on the remote user computer from a

31   first protocol into a second protocol associated with said

32   one server-based application so as to yield converted user

33   interaction data;

34   applying the converted user interaction data to

35   the server-based application at the office server;

36   converting output data, provided by said specific

37   one server-based application, from the second protocol to

38   the first protocol so as to yield converted output data;

39   and

40   transmitting the converted output data to the

41 user computer to be graphically rendered thereat, through

42 the browser, to the user.

1   Claim 12 (original): The method in claim 11 further

2 comprising the steps of:

3   for messages emanating from the user computer and

4 appearing on the WAN connection:

5   receiving, from the browser, a first message

6 containing the user interaction data associated with a

7 specific one server-based application and in the first

8 protocol;

9   converting the user interaction data in the first

10 protocol to the second protocol associated with the

11 specific one server-based application to yield a second

12 message; and

13   applying the second message, as input, to the

14 server computer for processing by the specific one

15 server-based application; and

16   for messages emanating from the server computer and

17 appearing on the LAN:

18   receiving, from the server computer and over the

19 LAN connection, a third message containing output data

20 generated by the specific one server-based application and

21 in the second protocol;

22   converting the output data message in the second

23 protocol to the first protocol to yield a fourth message;

24 and

25   applying the fourth message to the WAN connection

26   for transmission to the browser in order to render the

27   output data thereat.

1   Claim 13 (currently amended): The method in claim 12

2   further comprising the ~~SEP~~ step of implementing a

3   corresponding server for each of the server-based

4   applications either coincident with the platform or as at

5   least one physical computer separate from the platform and

6   connected, via the LAN, to it.

1   Claim 14 (currently amended): ~~The method in claim 13~~ A

2   method for use, in apparatus, which provides for providing

3   a web-accessible virtual processing environment to a

4   network-connected office server for a remotely connected

5   user computer through which a user stationed at the

6   computer can execute any of a plurality of server-based

7   applications resident at the office server, the apparatus

8   comprising a platform, capable of being situated in network

9   communication between the user computer and the office

10   server, having: a processor, a memory connected to the

11   processor and for storing computer executable instructions

12   therein; first and second network interfaces, operable in

13   conjunction with the processor, for interfacing the

14   platform, through the first network interface, to a wide

15   area network (WAN) connection through which the remote user

16   computer obtains connectivity to the platform, and, through

17   the second network interface, to a local area network (LAN)

18   having a server computer electrically communicative

19   thereover, respectively, with the server computer forming

20   the office server; wherein, the method comprises the steps,

21   performed by the processor, for each one of the

22   server-based applications:

23   providing, through a corresponding client

24   application module implemented on the platform for

25   each of the server-based applications, bi-directional

26   protocol conversion of messages between the remote

27   user computer and the office server, wherein the

28   providing step comprises the steps of:

29   converting user interaction data, intended for a

30   specific one of the server-based applications and

31   provided by a browser executing on the remote user

32   computer from a first protocol into a second protocol

33   associated with said one server-based application so

34   as to yield converted user interaction data;

35   applying the converted user interaction data to

36   the server-based application at the office server;

37   converting output data, provided by said specific

38   one server-based application, from the second protocol

39   to the first protocol so as to yield converted output

40   data; and

41   transmitting the converted output data to the

42   user computer to be graphically rendered thereat,

43   through the browser, to the user; and

44   for messages emanating from the user computer and

45   appearing on the WAN connection:

46   receiving, from the browser, a first message

47   containing the user interaction data associated with a

48   specific one server-based application and in the first

49   protocol;

50   converting the user interaction data in the first

51   protocol to the second protocol associated with the

52   specific one server-based application to yield a

53   second message; and

54   applying the second message, as input, to the

55   server computer for processing by the specific one

56   server-based application; and

57   for messages emanating from the server computer and

58   appearing on the LAN:

59   receiving, from the server computer and over the

60   LAN connection, a third message containing output data

61   generated by the specific one server-based application

62   and in the second protocol;

63   converting the output data message in the second

64   protocol to the first protocol to yield a fourth

65   message; and

66   applying the fourth message to the WAN connection

67   for transmission to the browser in order to render the

68   output data thereat;

69   implementing a corresponding server for each of the

70   server-based applications either coincident with the

71   platform or as at least one physical computer separate from

72   the platform and connected, via the LAN, to it; and

73   providing protocol translation of the user interaction

74   data and output data between the first and second protocols

75   through a separate software-implemented application module

76   for each of the specific server-based applications; wherein

77   the application module comprises:

78   a user interaction component communicative,

79   through the WAN connection, with the browser, for

80	accepting the user interaction data from the browser
81	in the first protocol and for providing said output
82	data to the browser in the first protocol;
83	a state machine, communicative through an
84	application processing interface with the user
85	interaction component, for interpreting each command
86	issued by the user interaction component so as to
87	provide the user interaction data to the specific one
88	server-based application executing on the server
89	computer, and communicative through a client protocol
90	component, for sending user interaction data to the
91	server-based application and for receiving said output
92	information from the specific one server-based
93	application; and
94	a client protocol component, operative in
95	conjunction with the state machine, for converting the
96	user interaction data received from the state machine
97	into the second protocol and applying resultant
98	messages in the second protocol to the specific one
99	server-based application, and for receiving said
100	output data in the second protocol from the specific
101	one server-based application and applying said output
102	data to the state machine.

1	Claim 15 (original): The method in claim 14 wherein the
2	server-based applications comprise thin-client application
3	hosting, e-mail and shared file access; and the first
4	protocol comprises HTTP, secure HTTP, or a protocol with
5	AIP-like functionality and the second protocol comprises

6   RDP (remote desktop protocol), IMAP (Internet mail access

7   protocol) or SMB (server message block).

1   Claim 16 (original): The method in claim 15 wherein the

2   user interaction data comprises a designation of a uniform

3   resource locator (URL), uniform resource identifier (URI),

4   form input data, user keystrokes or user mouse clicks that

5   returns associated information desired by the user, and the

6   output data comprises graphical display data.

1   Claim 17 (original): The method in claim 16 wherein said

2   output data comprises bitmap graphic output display data

3   generated by the specific one server-based application.

1   Claim 18 (original): The method in claim 17 wherein the WAN

2   connection comprises either a private network connection or

3   an Internet connection.

1   Claim 19 (original): The method in claim 18 wherein the

2   second network interface comprises an Ethernet interface,

3   and the first network interface comprises a broadband

4   network interface.

1   Claim 20 (original): The method in claim 19 wherein the

2   broadband network interface comprises a digital subscriber

3   line (DSL) interface, a cable modem, an integrated services

4   digital network (ISDN) interface, a T1 interface or a

5   fractional T1 interface.